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The New Curriculum...The First Year Normal and Functional Characteristics

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The New Curriculum . . . Years Two and Three

The Study of Disease Mechanisms

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Having obtained a thorough understanding of the structure, functions and chemistry of the animal body in a relative state of health during the first year, the veterinary student will be prepared to devote the next two years of his professional training to an investigation of the dynamics of disease. During this time he will be particularly interested in seeking the answers to such questions as: what is disease?; how does the body respond to disease?; what are the characteristics of the agents involved in causing disease?; what are the major diseases of domesticated animals?; how can these diseases be recognized? and finally, how can these diseases be treated, controlled or prevented?

To provide greater assistance to the student in his search for knowledge concerning these questions, the curriculum and its content for the second, and especially the third year, have received major restructuring. The objective for these changes was to establish the most efficient and effective alignment of courses and course material which would allow for a progressive understanding of disease concepts. Care was especially exerted to prevent and eliminate areas of useless duplication, speciality fragmentation, and malalignment of subject matter.

It was felt that if the eventual graduate is to be a successful practitioner he must be able to think and reason logically. Although these two processes are considered as innate abilities in all students (albeit in widely varying degrees), they have often been allowed to lay dormant, or even worse have been stifled by our encyclopedic and fragmentary approach to veterinary education. Therefore another goal in restructuring was to attempt to create a curricular environment which would capture the students' interest, encourage investigative study and help to develop the powers of rational thought.

With these objectives in mind, let us examine the curriculum for the second and third years (Page 55 this issue). For the most part, the second year is primarily concerned with the development of an understanding of what disease is, the general body response to it and a consideration of its causes. Thus we find general pathology, bacteriology, virology, parasitology and general medicine comprising the bulk of the courses. These courses will be little changed from their present form, but an attempt will be made to better correlate their subject matter.

It will be noted that pharmacology has been condensed and moved to the first two quarters of the second year. It was felt that this location in the curriculum would provide a closer and more complete bridge for the principles of physiology into the

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study of disease. It was further believed that the student would be better equipped to enter into the study of specific diseases of animals if the understanding of the principles of pharmacology preceded rather than accompanied the study of these diseases. To provide for more thorough integration of these principles, the pharmacology personnel will also be involved in the teaching of the applied clinical science course of the fourth year.

The nutrition course has been moved from the spring quarter of the third year and expanded into the first and second quarters of the second year. As with pharmacology, nutrition is placed in this position to help furnish a bridge for the conveyance of the concepts of physiology and biochemistry into applied study. This course will encompass the important elements of the present animal science 318 and 319 courses and in addition will be strengthened by more advanced study. Clinical application of the principles of nutrition will be provided through a laboratory rotation in the applied clinical science course of the fourth year.

The general medicine and general surgery courses are placed in the third quarter of the second year to serve as a link between the basic and more applied concepts of disease. They will generally be concerned with the more specific reactions of the body to disease and deal with the basic fundamentals of disease treatment. Both small and large animals will be considered in these courses.

The third year will concentrate on the specific diseases of domestic animals. It is in this year that the most advanced and exciting change has taken place in the curriculum. The courses of clinical medicine, infectious diseases and special pathology will be so aligned that their course content will be perfectly correlated. Each area of study will consider the same disease condition at the same time. By careful preparation and cooperation between the involved disciplines each disease will be presented as a diagnostic problem with careful attention being given to the history, clinical manifestations and methods of diagnosis. Once the diagnosis has been established, a detailed investigation of the pathogenesis of the condition will be developed. Where infectious diseases are involved, the role of the infectious agent in causing the disease and those characteristics concerned with its isolation and susceptibility to treatment will receive thorough consideration. An evaluation of the procedures for prevention, control and/or treatment will conclude the study of each disease.

Although each of these courses is listed separately and allotted a specific time space in the schedule, in reality they will be administered as a single course taught cooperatively by the three involved disciplines. Even the allotted time is misleading because flexibility of time will be required to maintain a regular and continuous advancement through each disease. Thus, for example, the clinical aspects of a disease may require only 15 minutes while a study of the pathogenesis might consume an hour and a half. The reverse may be true in the next disease to be studied. Each discipline will, therefore, be expected to take only that amount of time needed to adequately cover their phase of the study of each disease. In addition to the discussion portion of the course an integrated laboratory will be provided. Where possible, each disease will be reproduced experimentally and studied clinically, pathologically and epidemiologically. Where experimental reproduction is not feasible, motion pictures, pathological specimens and stock cultures of organisms will be utilized for study.

The significant diseases of large and small animals and poultry will be included in this correlated course.

It becomes readily apparent that the goal of this super course is to provide a comprehensive and logical approach to the study of disease. Instead of receiving a fragment here and a fragment there, redundant repetitions and contradictions each disease will be presented thoroughly and in its entirety. Since this approach will more closely simulate actual field experience with disease it is believed that the student will have a clearer understanding of the various diseases and a greater

appreciation of diagnostic procedures which he can more readily transfer to his clinical training and later to his professional career. In addition, the emphasis placed on problem solution and independent study and investigation is hoped to encourage the development of the process of rational thinking by the student.

Other features of the third year include the correlation of surgery and applied anatomy in the first quarter and the integration of toxicology and poisonous plants in the third quarter. Again these changes should eliminate areas of duplication and provide a clearer and more comprehensive understanding of these closely allied subjects.

The surgery courses, which will include both large and small animals, will be presented much as they have been. A notable exception will be less emphasis on the didactic portion and an increase in student participation. By placing the surgery courses, especially the practical portion, in the third year, each student will be ready to make full use of his surgery training throughout his clinical clerkship.

Little change will be made in the radiology course which has been placed in the third quarter of the third year.

The remaining course in the third year is veterinary clinical sicences. This course consists of three laboratory sections. Each section of students will take a different laboratory course each quarter. These laboratories will be obstetrics, survival surgery and applied medicine. They are designed to prepare the student in the necessary skills for his later clinical training.

Much controversy has already arisen concerning the 21 credit hours for each quarter of the third year. Despite the committee's efforts to reduce this load they were unable to do so and still attain the desired curricular structure. A closer evaluation of the schedule, however, helped alleviate our concern when it was pointed out that the great amount of correlation during this year should actually reduce the amount of time required by the student in study to grasp the concepts in these closely related areas. It was also noted that much of the credit time was consumed by laboratories which generally require less preparation time than do lecture credits. It is our feeling that the benefits gained from the improved structure of the curriculum will more than outweigh the inconvenience of the added credit load.

In summary, it can be said that the second and third years of the veterinary curriculum have been designed to focus the students' interests and activities toward the development of a thorough, logical and clear understanding of the dynamics of disease. In so doing, it is hoped that the student will be better oriented toward his clinical training and later to his professional activities.